ABSTRACT OF THE INVENTION

P-selectin has been demonstrated to bind primarily to a single major glycoprotein ligand on neutrophils and HL-60 cells, when assessed by blotting assays and by affinity chromatography of [^{3}H]glucosamine-labeled HL-60 cell extracts on immobilized P-selectin. This molecule was characterized and distinguished from other well-characterized neutrophil membrane proteins with similar apparent molecular mass. The purified ligand, or fragments thereof (including both the carbohydrate and protein components), or antibodies to the ligand, or fragments thereof, can be used as inhibitors of binding of P-selectin to cells, and to treat various conditions involving leukocyte binding via P-selectin glycoprotein ligand.